RAIN GARDEN SIZE

RAIN GARDEN PONDING DEPTH (Dp): _____ (3, 6 OR 9-INCHES RECOMMENDED)

SURFACE AREA = RUNOFF VOLUME (V) / PONDING DEPTH (FEET) = V/(Dp/12) = _____ SQUARE FEET

NOTE: BOTTOM OF RAIN GARDEN MAY HAVE VARYING DEPTHS IF WATER DRAINS FROM TEST PIT BETWEEN 12 AND 36 HOURS. GRADE BOTTOM WITH ZONES AT DIFFERENT ELEVATIONS TO IMPROVE SURVIVAL OF BIORETENTION PLANTS THAT CANNOT TOLERATE WET CONDITIONS FOR EXTENDED PERIODS. DETERMINE AVERAGE DEPTH TO CALCULATE REQUIRED SURFACE AREA. FOR EXAMPLE, 50% OF CELL HAS 9-INCH DEPTH AND 50% OF CELL HAS 6-INCH DEPTH; THE AVERAGE DEPTH IS 7.5-INCHES.

PEAK STORMWATER RUNOFF USING RATIONAL METHOD

C = RUNOFF COEFFICIENT = [(IMPERVIOUS AREA x 0.95) + (PERVIOUS AREA x 0.25)] / DRAINAGE AREA= _____

I = STORM INTENSITY (10-YEAR STORM EVENT, 5-MINUTE DURATION) FROM TABLE 3.1 OF CCAP BMP DESIGN MANUAL = _____ INCHES/HOUR

A = WATERSHED AREA DRAINING INTO BMP = _____ ACRES

PEAK FLOW FROM WATERSHED DURING 10-YEAR STORM EVENT = **Q = C x I x A**

Q = PEAK FLOW = _____ CUBIC FEET PER SECOND

OUTLET WEIR DESIGN

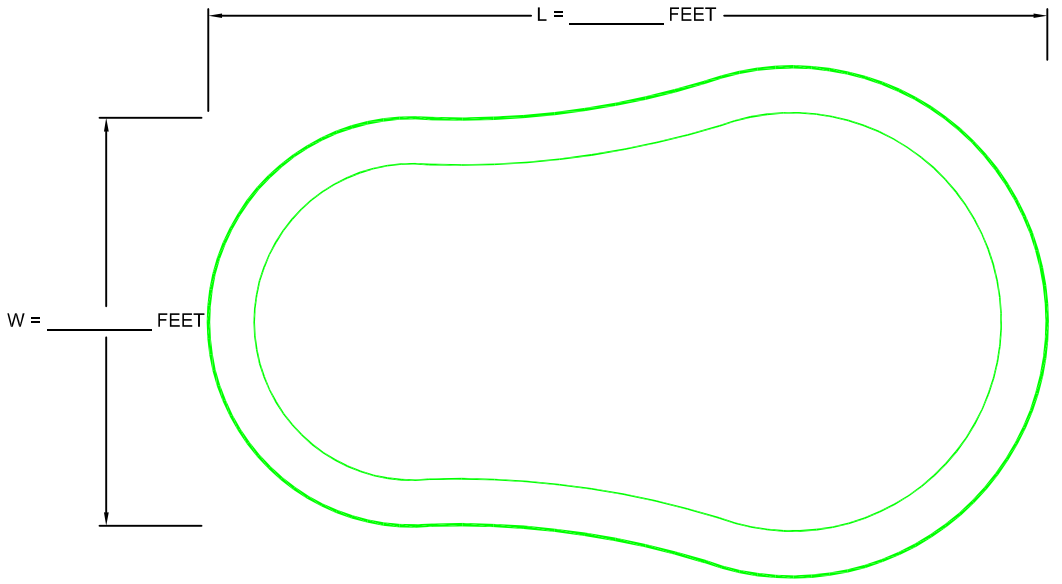
Cw = WEIR COEFFICIENT = 3.0

H = HEIGHT OF WATER OVER TOP OF WEIR = _____ FEET (*0.5 FEET MAXIMUM*)

Q = PEAK FLOW = _____ CUBIC FEET PER SECOND

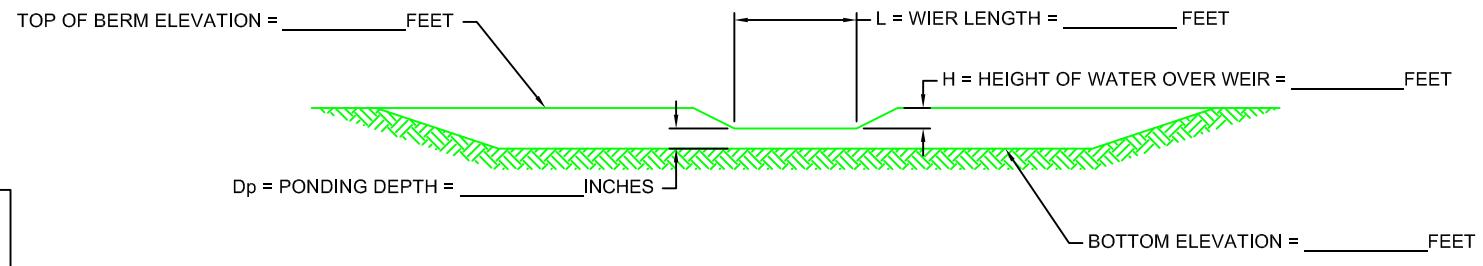
L = LENGTH OF WEIR = Q / (Cw x $H^{1.5}$) = _____ FEET

NOTES:



NOTE: LOCATE ALL INLET AND OUTLET LOCATION(S)
MARK ANY ZONES OF VARYING BOTTOM ELEVATIONS

PLAN
NOT TO SCALE



CROSS SECTION
NOT TO SCALE

WARNING:

LOCATE ALL UNDERGROUND UTILITIES BEFORE DIGGING. CALL **1-800-632-4949** FOR BURIED UTILITY LOCATION SERVICE.

NORTH CAROLINA SOIL&WATER CONSERVATION

FIELD OFFICE: _____
ADDRESS: _____
_____
PHONE: _____

LANDOWNER: _____
ADDRESS: _____
_____

REVISIONS			
NO.	BY	DATE	DESCRIPTION
1			
2			
3			
4			
5			

PROJECT #:	SCALE:
DRAWN BY:	DATE:
CHECKED BY:	DATE:
SHEET NO. 2 OF 3	FILENAME: RAINGARDEN2.DWG